

REMARKS

This communication is in response to the Action mailed on April 27, 2006. In that Action, claims 1 through 22 were rejected.

The applicants have amended claims 1 and 12 to clarify the meaning thereof and to correct inadvertent errors therein.

The Examiner first rejects claim 1 under 35 U.S.C. 112 as being indefinite in use of the phrase "said end wall region portion" in claim 1. The applicants have corrected this phrasing in claim 1 in the above amendment and believe this rejection has thereby been overcome.

Next, the Examiner rejects claims 1 through 22 under 35 U. S. C. 103 as being obvious in face of U.S. Patent 6,724,144 to Takeji et al. taken in view of U.S. Patent 6,300,729 to Keijser et al. The Examiner appears to contend that the Takeji reference shows the metal halide lamps of the present invention except for not having the ratio of the separation length to the effective operation diameter being greater than 2. This deficiency of the Takeji reference the Examiner finds to be supplied by the Keijser reference disclosure in the Summary appearing in column 2 thereof. With these contentions, the applicants must respectfully disagree.

The Examiner states, in his reliance on the Takeji reference for rejecting claim 1, that it comprises "a discharge chamber (see Fig. 2) having light permeable walls of a unitary single piece structure that is free of piece part joint therein with resulting thickened portions (11A) of the side walls and of being a selected shape (cylinder) bounding a discharge region of selected volume including therein a pair of end region wall portions (11C, lines 9-19 of column 3) through each of which a corresponding one of a pair of electrodes are supported... ." A similar statement is made in relying on the Takeji reference for rejecting claim 12 except for adding there that the "end region wall portions" are of a "hemispherical shape." Finally on this regard, the Examiner further states in his Response to Arguments section following the claims rejections "that Takeji teaches a discharge chamber having walls of a unitary single piece structure (11 of Fig 2), and the narrow end region (neck portion of the main body, 11C) having an inner and outer surface which is smooth.

Argument of terminal plate is irrelevant since as far as the wall of the end region (wall of 11C) is concerned it satisfies the claimed structural limitations."

However, in clear contrast to these statements, terminal plates 13 of the Takeji reference is anything but irrelevant with respect to claims 1 and 12 because, in the absence of such terminal plates, the discharge chamber walls do not bound a selected volume as required by those claims. In fact, the discharge chamber walls of the Takeji reference arc tube 6 bound no volume at all without terminal plates 13 as the end wall portions that would remain without those plates present will leave that tube open ended so as to not bound any finite volume. Thus, to meet these claims (and certainly as a practical matter to have a useable lamp that is capable of containing ionizable materials), terminal plates 13 must be in the end wall portions of arc tube 6 in the Takeji reference lamp. That being so, arc tube 6 of the Takeji reference lamp quite clearly does not have a discharge chamber that is "a unitary single piece structure that is free of piece part joints therein" and so to have inner and outer surfaces that are smooth. Furthermore, the Takeji reference arc tube 6 without terminal plates 13 considered present therein as end region wall portions has no wall portions through which electrodes are supported, as required by claims 1 and 12, but instead would merely have electrodes passing by the walls (11C) thereof.

Nevertheless, in distinguishing claims 1 and 12 more explicitly over the Takeji reference, the applicants have now amended claims 1 and 12 to now require that the discharge chambers recited therein have walls and tubes (with electrodes therein) that are free of overlapping wall structures between those walls and those tubes, such overlapping having been described as being avoided in the specification in the first full paragraph beginning on page 5 so as to get way from developing "cold spots" thereabout in the chamber. Such "cold spots" are to be avoided, as has been noted before, because they lead to reducing vapor pressures of ionizable materials in the chambers and so corresponding decreases in the emitted light radiation.

Similarly, discharge vessel 3 of the Keijser reference has walls, end plates and end plugs shown to be joined to adjacent one or adjacent ones thereof in the form of right angle joints

therebetween to thereby result in overlapping joints with thickened wall portions which is directly in contrast to the requirements of claims 1 and 12. In these circumstances, the applicants respectfully submit that claims 1 and 12 are clearly allowable over the Takeji and Keijser references taken either alone or together, and so then are the claims dependent thereon.

In view of the foregoing, the applicants respectfully request that the Examiner reconsider his rejection of claims 1 through 22 as amended, and further request that these claims as amended now be allowed.

The Commissioner is authorized to charge any additional fees associated with this paper or credit any overpayment to Deposit Account 11-0982.

Any inquiries regarding this application should be directed to Theodore F. Neils at (612) 339-1863.

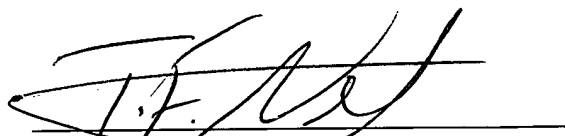
Respectfully submitted,

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By:



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